



A Rock Pipe Inlet Sediment Trap Type A (PIST-A) is a horseshoe shaped device with a built-in sediment storage area around the perimeter of the structure. The PIST-A shall be used at pipe inlets no larger than 36 inches in diameter where flow is being received from several directions. The PIST-A utilizes class B stone lined with sediment control stone to protect drainage pipe structures by trapping sediment before it enters. If required, a sediment storage pit may be designed by the same procedures as a silt basin.

AREAS OF USE:

- At pipe inlets no larger than 36 inches in diameter where flow is being received from several directions.
- At least 30 feet from a vehicular travel lane, in order to prevent a safety hazard.
- In areas where it can be cleaned and maintained on a regular basis.

DESIGN CRITERIA:

- The drainage area should not exceed 5 acres.
- The sediment trap should provide a storage volume of 3600 cubic feet per acre of disturbed area, and a surface area of 435 square feet per cfs of Q_{10} peak inflow.
- The stone dam should be a minimum of 18 inches high.
- The top of the PIST-A shall be a minimum of 1 foot below the top of the fill over the pipe.
- Some of the required volume may be provided by up or downstream controls.
- Because of the stone dam, the PIST-A should be placed at locations that will not create a safety hazard.

CONSTRUCTION SPECIFICATIONS:

- The PIST-A should have a minimum height of 18 inches.
- Side slopes shall be no steeper than 2:1.
- Structural stone should have a minimum width of 8 ft. at its base and 2 ft. at its top.
- The layer of sediment control stone should be a minimum of 12 inches thick.
- The top of the trap should be a minimum of 12 inches below the roadway shoulder or diversion point.
- Stone should be tied into slopes to prevent water from bypassing the device.

MATERIAL SPECIFICATIONS:

- Structural stone shall be class B stone that meets the requirements of Section 1042 of the Standard Specifications for Stone for Erosion Control, Class B.
- Sediment control stone shall be #5 or #57 stone, which meets the requirements of Section 1005 of the Standard Specifications for these stone sizes.



PAYMENT:

- Installation of measure:
Stone for Erosion Control, Class B Ton
Sediment Control Stone Ton
- Silt cleanout of device:
Silt Excavation Cubic Yard

MAINTENANCE:

- Inspect the PIST-A after each significant rainfall.
- Remove and dispose of all silt when accumulations reach one-half of the basin area formed by the device.
- Replace sediment control stone when water no longer drains through the device between rainfall events.
- Cleanout when clogged by straw, limbs, or other debris.

TYPICAL PROBLEMS:

- Silt accumulations are not removed when needed causing silt to enter pipe.
- Structure is not rebuilt when damaged by storms, equipment, etc.
- Stone is not cleaned or replaced when clogged-up.
- Stone is not tied into slopes.